Tevatron BLM Review

- BLM Replacement Prototype schedule:
- Provide prototype digitizer cards, crate, readout path by ~ Aug 2
- In order to test the key components of the system with real beam, in real beam environment we will need:
  - 1) >2 Digitizer Cards
  - 2) Crate, Backplane
  - 3) Timing Controller Card

- Readout using existing test stand CPU and EDB interface

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- BLM Replacement Production schedule:
- If digitizer tests are successful, and we pass a technical review we will order production quantities of parts.
- The remainder of the schedule is paced by the engineering effort required to design the other cards, and the system testing which involves the BLM project and machine people. The digitizer design is the responsibility of Craig Drennan. It is assumed here that all the other cards are the responsibility of Al Baumbaugh.
- If all goes well, we could have a full crate of pre-production cards to test by Feb 2005, this assumes 3 versions of digitizer card and 2 versions of all other cards.
- Single crate testing and modifications -- 3 months (Tevatron Only).
- This system is left in place to gain operational experience.
- Production, testing and installation of the full set of BLM Crates and systems -- 2 months + 2 months
- On this draft, system is available at the beginning of Sept. 2005

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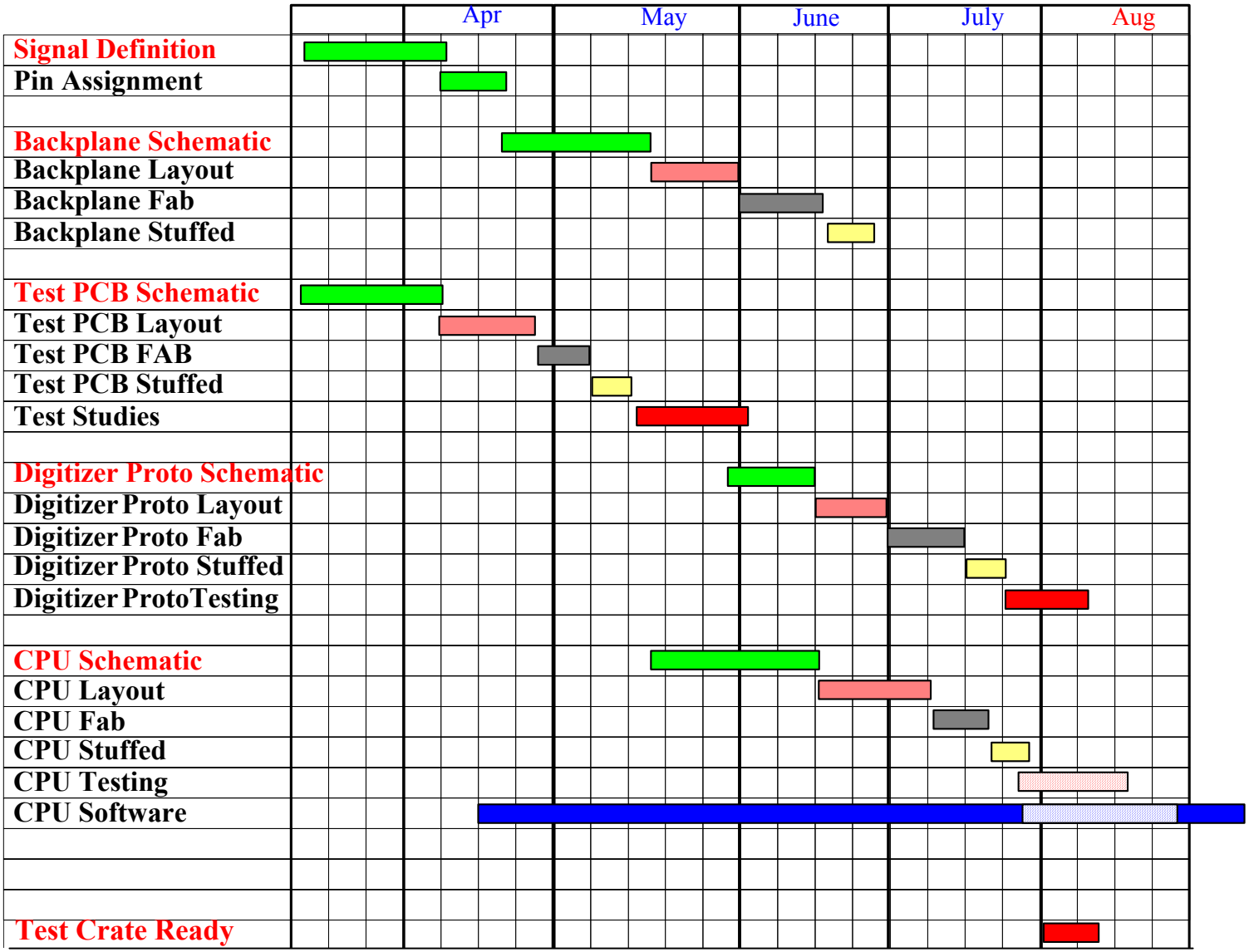

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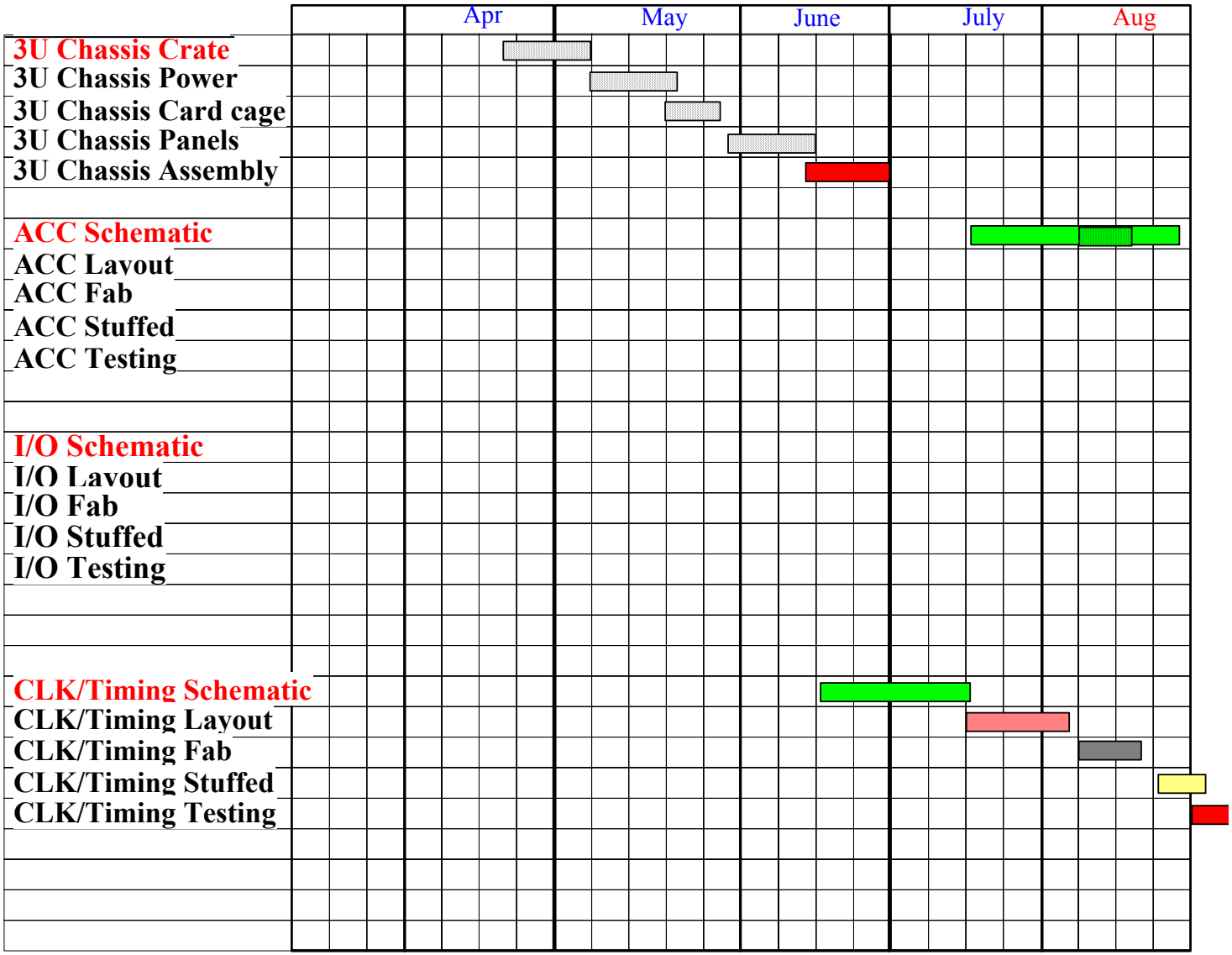

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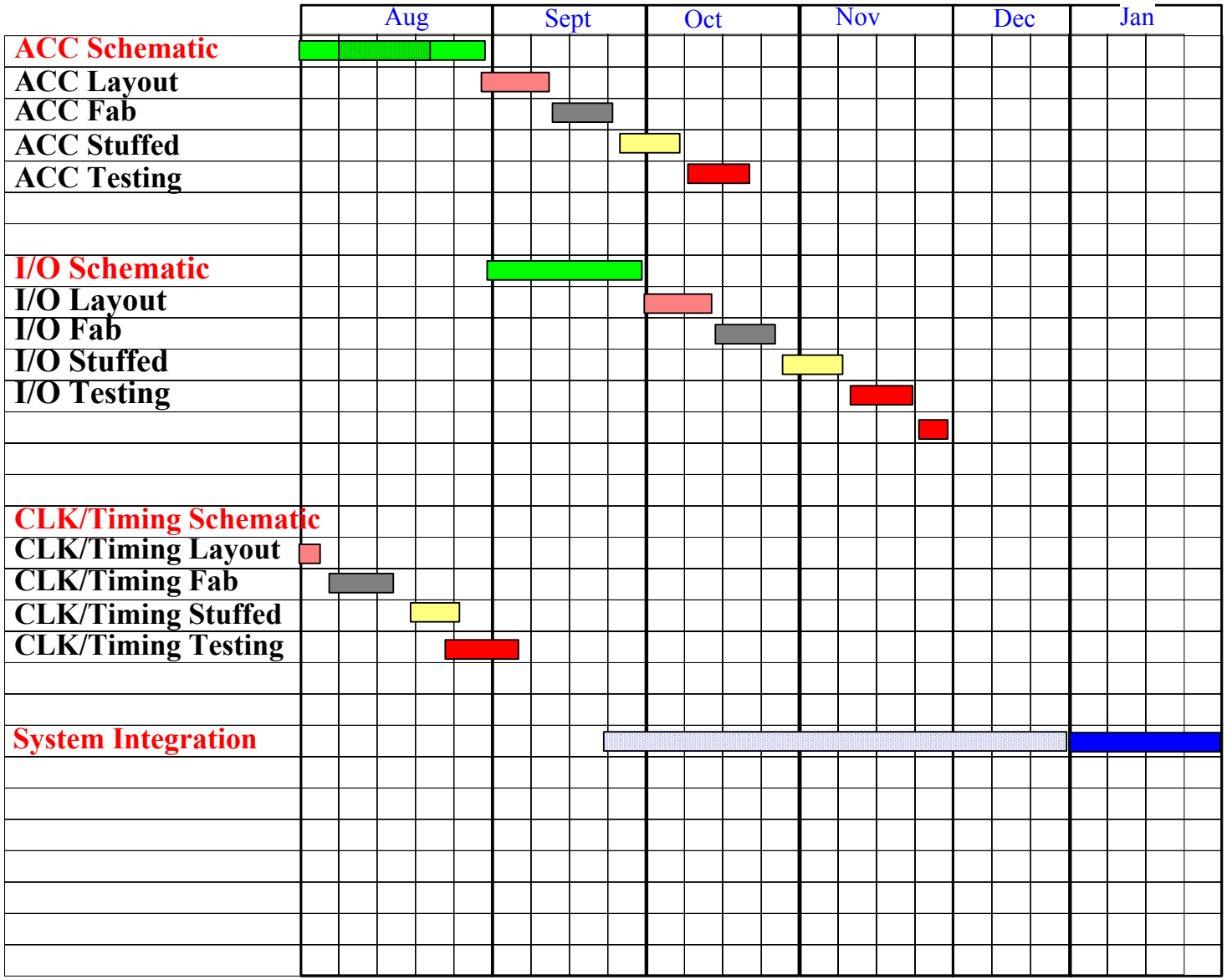

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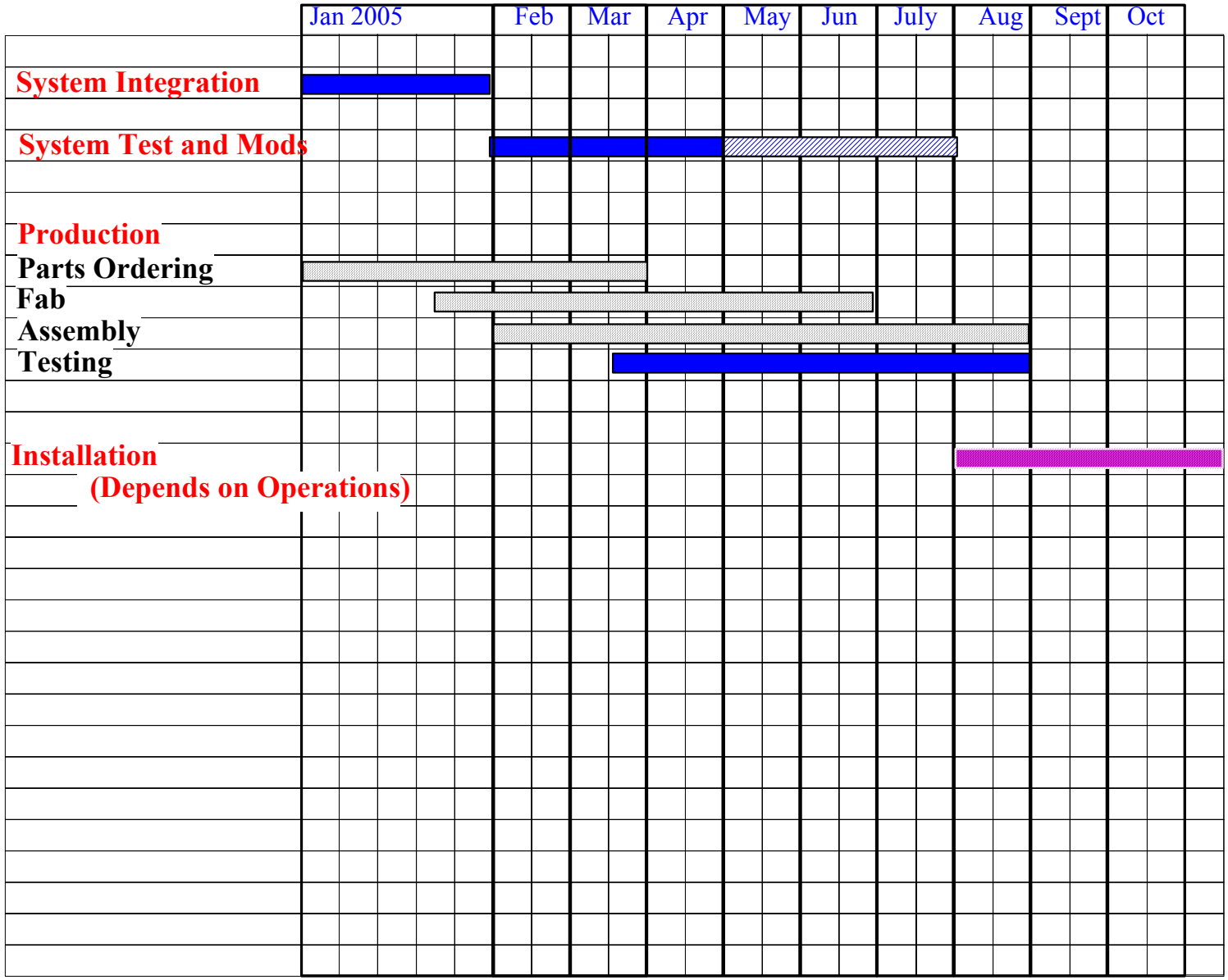

Tevatron BLM Review

remarks on draft schedule

Boards can be designed in parallel.

Schedule paced by available engineering; (layout and assembly resources are available)

Could reduce overall time by ~ 4 months with extra effort

Tevatron BLM Review

- BLM Replacement Current Status:

- Pre-Prototype Digitizer Card is in layout
- Analog Front end Testing nearly complete
- Backplane Schematic is nearly complete
- We are finalizing the specs in conjunction with Tevatron, Booster, and Main Injector personnel
- Work has started on Software for new CPU
- We are in the process of getting a sample 3U Crate from Rittal
- Architecture of the New CPU, Abort Controller Card, Timing Card, and EDB Interface Card are complete. Schematic work has not yet begun.

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- The full functionality of these systems requires ACNET front end software and application software to deal with the new BLM data structures. At installation the new BLMs will “look” like the old BLMs, which do not have the many buffers and abort modes of the new system.

- Initially we may read out the new BLMs through the old multibus BPM system.

- Software development will continue in both Host and front ends for some time.